The University of Saskatchewan
Department of Computer Science

Final Exam   Computer Science 470/816   Tuesday, December 10, 1996

140 marks   Answer all questions in the answer book

humor/comedy

Answer all questions in the exam based on the following case:

The Marvelous Metropolitan Museum of Mirth, Music, and Magic (**6M**) has decided to develop a museum Web site that patrons can use to find answers to all kinds of questions while visiting the museum and to serve the various needs of virtual patrons around the world.

Each of the six floors of the actual museum is devoted to a particular theme:

1st Floor is for Commercial Creativeness (i.e. admission booth, museum store, snack bar, and offices)
2nd Floor is for Educational Endeavors
3rd Floor is for Trick Treats — Magic
4th Floor is for Music Mania. music
5th Floor is for Merry Madness — Mirth
6th Floor is for Fleeting Fun (i.e. special exhibits)

80 marks   **Question 1 - Analysis & Design**
(Use a table to help structure your answer parts a, b, c, & d of this question)
NOTE: <u>each of your answers to the parts of this question should be different</u>
<u>DO not use the same answers for different users</u>

10   a) identify and briefly describe the distinguishing characteristics of 5 distinct types of users (*hint: do not develop groups of users based on interests in only one of the museum floors*)

10   b) for each type of user identified, describe the scenario of use that would be most typical of that type of user. (*hint: each scenario should be significantly different*)

        c) for each type of user identify:

15   i)   3 distinct types of application specific content (data or information) that would be uniquely used by that type of user

15   ii) 3 distinct tasks unique to that type of user

15   iii) 3 distinct tools (other than computer applications) that that type of user might use for these tasks

10   d) for each type of user, describe 1 distinct approach to presentation design that would help your site serve that type of user

5   e) discuss how you could put these various needs and approaches together in a single well designed site.

call upon
for help
ways the user
would normally try
to work with /
to acquire

30 marks   **Question 2 (marks) Usability First**
"User-centered design" expects the developer to focus on the needs of the user, whereas "Usability First" expects that the needs of both the user and developer must be met and that there will be occasions for tradeoffs to be made.

10   a) describe five potential design tradeoffs where increasing usability for the user(s) would considerably decrease the usability for the developer — Ease of development

10   b) for each tradeoff describe how you would could evaluate the usability issues involved in the tradeoff   Metrics   How would an evaluation

10   c) for each tradeoff describe how you would determine the appropriate action to take
        How would you interpret the results of the evaluation. what would you do.

30 marks   **Question 3(marks) Planning**
Web sites need to be constantly improving.

10   a) describe the contents and design of a first version of the Web site that is sufficiently useful to provide some help (and be of interest) to each of the groups of users

10   b) describe plans for how the Web site should evolve to provide more complete information to the users

10   c) describe 5 distinct uses of intelligent agents that could be added to the Web site described in b)